



## CERTIFICATE OF FIRE APPROVAL


This is to certify that

The product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

<b>Manufacturer</b>	Fabrik Chemischer Präparate von
<b>Address</b>	Dr Richard Sthamer GmbH & Co KG Liebigstraße 5 22113 Hamburg Germany
<b>Type</b>	<b>FOAM CONCENTRATE</b>
<b>Description</b>	Fire Extinguishing Foam Concentrate – Type: "STHAMEX-AFFF 3% F-15 #4341" For Low Expansion Foam Applications
<b>Specified Standard</b>	IMO MSC.1/Circ. 1312

The attached Design Appraisal Document forms part of this certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Date of issue	13 September 2017	Expiry date	12 September 2022
Certificate No.	SAS F170218	Signed	 Torsten Radtke Hamburg Technical Support Office Lloyd's Register EMEA <small>LR021.1.2016.06</small>
Sheet No	1 of 3	Name	T. Radtke Surveyor to Lloyd's Register EMEA A Member of the Lloyd's Register Group

**Note:**

**This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid Certificate.**

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



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## DESIGN APPRAISAL DOCUMENT

Date 13 September 2017	Quote this reference on all future communications HTSO/STAT/TA/175017/TRA
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### ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F170218

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions, and this Design Appraisal Document forms part of the Certificate.

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#### APPROVAL DOCUMENTATION

MPA Dresden GmbH, Freiberg, Germany, Certificate No. 2013-F-0193/Sth 157, dated 11 April 2013.

#### CONDITIONS OF CERTIFICATION

1. May be used as a low expansion foam at 3% minimum concentration, in suitable equipment, for hydrocarbon fire applications
2. The expansion ratio of the foam shall not exceed 12:1 for low expansion applications
3. The foam concentrate should be stored above its freezing temperature
4. Not to be used in temperatures of less than -15°C
5. The storage container should be compatible with its foam concentrate throughout the service life of the foam
6. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype

#### NOTES

1. Periodical testing of foam concentrates samples to be performed at not more than 3 years after being supplied to ship, and after that, every year
2. A Batch Certificate should be provided with each delivery, with a declaration of the main characteristics by the manufacturer and will be the basis for the periodical testing



Lloyd's  
Register

## Lloyd's Register EMEA

71 Fenchurch Street, London, EC3M 4BS

Telephone 020 7423 2416 Fax 020 7423 2053

Email [tass@lr.org](mailto:tass@lr.org)

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#### ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F170218

#### PLACE OF PRODUCTION

Fabrik Chemischer Präparate von  
Dr Richard Sthamer GmbH & Co KG  
Liebigstraße 5  
22113 Hamburg  
Germany



Torsten Radtke  
Senior Specialist Statutory Service  
Lloyd's Register Marine  
Hamburg Technical Support Office  
Lloyd's Register EMEA

#### Supplementary Type Approval Terms and Conditions

*This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).*